



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,629	11/28/2000	Alex Truong	081862.P184	7864

7590 05/05/2005

Sanjeet K. Dutta  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
Seventh Floor  
12400 Wilshire Boulevard  
Los Angeles, CA 90025-1026

EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
----------	--------------

2153

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/724,629

Applicant(s)

TRUONG ET AL.

Examiner

Bradley Edelman

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office action is in response to Applicant's amendments and request for reconsideration filed on January 28, 2005. Claims 1-24 are presented for further examination.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 6, 12-14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi (U.S. Patent No. 6,457,056), in view of Kicklighter (U.S. Patent No. 6,005,841).

In considering claim 1, Choi discloses in a digital communications network, a method for controlling tasks performed on network cards comprising:

Controlling applications executed within the network (col. 4, lines 39-41, "main process card 100 having an upper application program, network interface cards 200, 200' which are controlled by the main process card 100..."), wherein controlling the applications comprises:

Transitioning each of the applications between one of a plurality of active states and one of a plurality of standby states (col. 5, lines 7-12, describing the "preparing state" of the upper application layer; col. 5, lines 46-67, further describing

"changing/writing a call process state on a self database," wherein the states include a "setup request" state, a "setup indication" state, an "alert request" state, and an "alert indication," in addition to a "calling state" and a "connecting indication" state, which constitute active and standby states).

However, while Choi discloses using multiple cards, Choi does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Choi, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to a person having ordinary skill in the art to separate the single card system of Choi into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 2, Choi further discloses that an application state machine controls the execution of the application (col. 5, lines 17-19, "application program of the MPC 100 controls each call of the network interface card").

In considering claim 3, Choi further discloses receiving control messages from a shelf manager ("main process card 100"), and communicating via APIs to the application, wherein the shelf manager may be located on a remote network card (Fig. 4, showing that the MPC 100 may be remote, wherein an API is necessarily used to allow communication between the manager application and the application on the NIC.

In considering claim 6, Choi discloses in a digital communication network, a method for controlling tasks performed on network cards (col. 5, lines 48-64), comprising:

Switching the state of an application in an active state to a standby state, comprising,

Transitioning the application from the active state to a quiescent state (col. 5, lines 65-67; col. 6, lines 1-2, i.e. moving from a "connecting indication" state to a "request call release" state); and

Transitioning the application from the quiescent state to the standby state (col. 6, lines 1-13, i.e. moving from the "request call release" state to a "call is released" state).

However, while Choi discloses using multiple cards, Choi does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Choi, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of

Art Unit: 2153

applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to a person having ordinary skill in the art to separate the single card system of Choi into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 12, claim 12 presents a system for performing the method described in claim 1, and is thus rejected for the same reasons.

In considering claim 13, claim 13 presents a system for performing the method described in claim 3, and is thus rejected for the same reasons.

In considering claim 14, claim 14 presents a system for performing the method described in claim 6, and is thus rejected for the same reasons.

In considering claim 17, claim 17 presents a computer readable medium for performing the method described in claim 1, and is thus rejected for the same reasons.

In considering claim 18, claim 18 presents a computer readable medium for performing the method described in claim 3, and is thus rejected for the same reasons.

In considering claim 19, claim 19 presents a computer readable medium for performing the method described in claim 6, and is thus rejected for the same reasons.

2. Claims 1-2, 4-12, 14-17, and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al. (U.S. Patent No. 6,650,640, hereinafter "Muller"), in view of Kicklighter.

In considering claim 1, Muller discloses in a digital communications network, a method for controlling tasks performed on network cards ("NICs") comprising:

Controlling applications executed within the network (col. 11, lines 23-25, wherein the applications are receiving packets and transferring packets), wherein controlling the applications comprises:

Transitioning each of the applications between one of a plurality of active states and one of a plurality of standby states (col. 11, lines 23-67; col. 17, lines 54-63, describing various active and standby states – i.e. extraction state 136 and wait state 400).

However Muller does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Muller, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active

Art Unit: 2153

cards and standby cards (col. 6, lines 32-47, describing “active card 38(A)” and “standby card 38(S)”). Given the teaching of Kicklighter, it would have been obvious to a person having ordinary skill in the art to separate the single card system of Muller into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 2, Muller further discloses that an application state machine controls the execution of the application (cols. 11-12, wherein a state machine necessarily controls the application which is transitioning through various states).

In considering claim 4, Muller further discloses that the plurality of active states comprise an active ready state (“state 132” in which a packet is received), a quiescent state (“state 136” in which the packet does not move, but is merely analyzed), and a no provisioning state (“state 142” in which no provisioning occurs).

In considering claim 5, Muller further discloses that the standby states comprise:

A standby ready state (“wait state”); and

A standby locked state (“state 430,” col. 18, lines 56-67, wherein if the packet does not match the desired criteria, it is not actively processed and the process ends).



In considering claim 6, Muller discloses in a digital communication network, a method for controlling tasks performed on network cards ("NICs," col. 11, lines 23-26), comprising:

Switching the state of an application in an active state to a standby state, comprising,

Transitioning the application from the active state to a quiescent state (col. 11, lines 27-59, wherein the application transitions from "state 132" in which a packet is actively received, to "state 136," wherein the packet does not move but is merely analyzed); and

Transitioning the application from the quiescent state to the standby state (col. 17, lines 54-63, in which the card returns to the "wait state" when packets are not being processed, and thus transitions from the "state 136" described above to the "wait state" after the packet is fully processed).

However Muller does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Muller, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to

Art Unit: 2153

a person having ordinary skill in the art to separate the single card system of Muller into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 7, Muller discloses in a digital communication network, a method for controlling tasks performed on network cards ("NICs," col. 11, lines 23-26), comprising:

Switching the state of an application in an active state to a standby locked state, comprising,

Transitioning the application from the active state to a no-provisioning state (col. 11, lines 27-59; col. 12, lines 15-18, wherein the application transitions from "state 132" in which a packet is actively received, to "state 142" in which no provisioning occurs;

Transitioning the application from the no provisioning state to a quiescent state (col. 12, lines 15-18-27, wherein the application transitions from "state 142" to "state 144," wherein the packet is still not transferred to the host memory, and thus is quiescent); and

Transitioning the application from the quiescent state to the standby locked state (col. 17, lines 54-63, in which the card returns to the "wait state" when packets are not being processed, and thus transitions from the "state 144" described above to the "wait state" after the packet is fully processed).

However Muller does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless,

Art Unit: 2153

transitioning application states between separate active and standby cards, rather than using a single card as taught by Muller, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to a person having ordinary skill in the art to separate the single card system of Muller into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 8, Muller further discloses that the standby locked state does not allow disk database access nor access to write to RAM (i.e. the "idle" or "wait" state only allows the card to listen for packets).

In considering claim 9, Muller further discloses that the no provisioning state does not allow access to write to a disk database (i.e. "state 142" only waits and does not allow writing to a database).

In considering claim 10, Muller further discloses that the quiescent state does not allow access to write to a disk database nor access to write to RAM (i.e. "state 144" only

determines if the packet will soon be transferred, and does not allow write access to a database or RAM).

In considering claim 11, Muller discloses in a digital communications network, a method for controlling tasks performed on network cards ("NICs"), comprising:

Upgrading code of an application in a standby state to an active state, comprising:

Transitioning the application from the standby state to a no provisioning state (col. 17, lines 54-63; col. 12, lines 10-20, i.e. from the "wait state" to "state 142" in which no provisioning occurs); and

Transitioning the application from the no provisioning state to the active state (col. 12, lines 20-31, wherein the application transitions from "state 142" to "state 146" in which the packet is transferred).

However Muller does not explicitly disclose that the states occur on separate cards, one being an active card and the other being a standby card. Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Muller, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to

Art Unit: 2153

a person having ordinary skill in the art to separate the single card system of Muller into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 12, claim 12 presents a system for performing the method described in claim 1, and is thus rejected for the same reasons.

In considering claim 14, claim 14 presents a system for performing the method described in claim 6, and is thus rejected for the same reasons.

In considering claim 15, claim 15 presents a system for performing the method described in claim 7, and is thus rejected for the same reasons.

In considering claim 16, claim 16 presents a system for performing the method described in claim 11, and is thus rejected for the same reasons.

In considering claim 17, claim 17 presents a computer readable medium for performing the method described in claim 1, and is thus rejected for the same reasons.

In considering claim 19, claim 19 presents a computer readable medium for performing the method described in claim 6, and is thus rejected for the same reasons.

In considering claim 20, claim 20 presents a computer readable medium for performing the method described in claim 7, and is thus rejected for the same reasons.

In considering claim 21, claim 21 presents a computer readable medium for performing the method described in claim 11, and is thus rejected for the same reasons.

In considering claim 22, Muller discloses in a digital communications network, a system for controlling tasks performed on network cards ("NICs," col. 11, lines 23-26) comprising:

A CPU subsystem ("CPU," col. 53, lines 8-24);

One or more input/output ports connected to the CPU subsystem for communicating with the network ("Input port processing module 104," Fig. 1); and

Special hardware connected to the CPU subsystem via a bus ("PCI bus," col. 50, lines 15-23), wherein the CPU subsystem controls applications executed within the network (col. 11, lines 23-26, wherein the NIC is ultimately controlled by the host CPU).

However Muller does not explicitly disclose that active and passive states occur on separate cards, one being an active card and the other being a standby card.

Nonetheless, transitioning application states between separate active and standby cards, rather than using a single card as taught by Muller, is well known, as evidenced by Kicklighter. In a similar art, Kicklighter discloses a system for controlling states in a cards of a switching system (Abstract), wherein the states of applications change between active and standby states (col. 7, lines 5-11), and wherein the states occur on

Art Unit: 2153

separate active cards and standby cards (col. 6, lines 32-47, describing "active card 38(A)" and "standby card 38(S)"). Given the teaching of Kicklighter, it would have been obvious to a person having ordinary skill in the art to separate the single card system of Muller into two separate cards, in order to increase the speed of the system by requiring faster and simpler processing on each card.

In considering claim 23, Muller further discloses a disk database ("flow database 110," on the NIC, col. 8, lines 50-60) connected to the CPU system via a PCI bus (col. 50, lines 18-20, "NIC 100 is coupled to the host computer by a PCI bus").

In considering claim 24, Muller further discloses that the CPU subsystem comprises:

A central processing unit ("CPU");

A system controller connected to the central processing unit ("control queue 118," col. 52, lines 43-67; Fig. 1);

Random access memory ("random access memory") connected to the system controller (col. 52, lines 43-50); and

An application state machine for transitioning applications between one of a plurality of active states and one of a plurality of standby states (col. 11, lines 23-67; col. 17, lines 54-63, describing various active and standby states – i.e. extraction state 136 and wait state 400)

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 12, 17, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kicklighter.

In considering claim 1, Kicklighter discloses the claimed method for controlling applications executed within the network, wherein controlling the applications comprises:

Transitioning each of the applications ("APPLICATION") between one of a plurality of active states on an active card of the network cards ("active card 38(A)") and one of a plurality of standby states on a standby card of the network cards ("standby card 38(S)"; col. 6, lines 32-55; col. 7, lines 5-20).

Claims 12, 17, and 22 are system and computer readable medium claims containing the same limitations as claim 1 and are rejected for the same reasons (claim 22 contains additional hardware limitations, all of which are further disclosed by Kicklighter – see Figs. 1 & 2).



***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 703-306-3041. The examiner can normally be reached from 9 a.m. to 5 p.m.

Art Unit: 2153

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Bradley Eddleman*

BE

April 30, 2005